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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/369,980

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GALLOWAY

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24180-044002

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EXAMINER

DYE, R

ART UNIT

PAPER NUMBER

1772

DATE MAILED:

04/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.

09/369,980

Applicant(s)

Galloway et al.

Examiner

Rena L. Dye

Group Art Unit

1772

☒ Responsive to communication(s) filed on Jan 25, 2001

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 17, 18, 20, and 21 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 17, 18, 20, and 21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 13

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Introduction

1. The rejection of record as set forth in the last office action (paper no. 9), has been withdrawn in view of Applicant's claimed subject matter having an effective filing date of June 23, 1994, as filed in parent application serial number 08/082,226.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17,18,20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Newsome (4,457,960) in view of Lai et al. (5,272,36) and further in view of Wilhoit (5,283,128).

Newsome teaches linear low density polyethylene (LLDPE) used in multiple layer molecularly oriented films (Abstract). The film includes a first barrier layer having two opposing surfaces wherein first and/or second pairs of layers are adhered. In preferred structures the first pair of layers comprises 70% to 100% EVA and the second pair of layers comprises 10% to 90% LLDPE. In an embodiment involving a partial reversal of roles, the first pair of layers comprises

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50% to 100% LLDPE. The second and third layers, or barrier layer, may comprise an ethylene vinyl acetate (EVA), and the fourth layer comprises 10% to 100% LLDPE (column 2, lines 40 to column 3, line 24). Newsome uses conventional LLDPE, wherein one commercially available material is DOWLEX (column 5, lines 45+). The barrier layer may be ethylene vinyl alcohol copolymer (column 3, lines 25-28). A substantial end use of the film is in heat sealable shrink bags for utilization particularly in packaging (column 3, lines 32-37). The thickness of each layer of the film is essentially the same as the same layer in conventional shrink films. By way of example in a typical film used to make the bag of Figures 1 and 2, the overall film thickness is 2.25 mils. Layers 14 and 18 are 0.4 mil, and layer 16 is 1.45 mils (column 4, lines 60-65).

Newsome does not teach using metallocene catalyzed polyethylenes, or polymers or copolymers formed by a polymerization reaction with a single site catalyst wherein the ethylene alpha olefin copolymer having a molecular weight distribution of less than 2.5 and I_{10}/I_2 ratio of about 7 to about 12.

Lai et al. teaches a substantially linear polyethylene that has superior properties to conventional polyethylenes, wherein comparisons are made between their invention and DOWLEX 2054, a conventional LLDPE (see Examples 7-9). They also teach that the polymers of their invention are superior to conventional polyethylene polymers in terms of gloss, haze, dart impact, and clarity (see Examples 10-13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the substantially linear olefin polymers of the type taught by Lai et al. in

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place of the DOWLEX used in the films taught by Newsome, in order to have produced a film having higher gloss, lower haze, and better clarity. Further, the recited ethylene alpha olefin copolymer having a molecular weight distribution of less than 2.5 and I_{10}/I_2 ratio of about 7 to about 12 would be well within the skill of the ordinary artisan based upon the intended use of the packaging material. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955).

The combination of reference fails to specifically teach irradiation of the film.

Wilhoit teaches a heat shrinkable multilayer food packaging film including similar layers to that of Newsome EVOH, EVA and ethylene alpha-olefin copolymers. Wilhoit further teaches that it is desirable to cross-link one or more layers if the film is the multilayer type, to provide improved abuse and/or puncture resistance. This may be accomplished by irradiation (column 11, line 61 to column 12, line 34).

Since Wilhoit teaches cross-linking by irradiation of a similar film material to that of Newsome for use in food packaging, it would have been obvious to one having ordinary skill in the art to have irradiated the film of Newsome to have provided additional abuse and puncture resistance.

Although the combination of references does not specifically teach the claimed thicknesses, it would have been obvious to one having ordinary skill in the art to have varied the thickness of the layers based upon the desired degree of strength and flexibility. Since the

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Newsome reference teaches film layer thicknesses which are reasonably close to that which is claimed, varying the thickness of the film layers is deemed to be routine optimization and would have been obvious to one having ordinary skill in the art based upon the desired properties.

4. Claims 17,18,20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Newsome (4,457,960) in view of Schut "Enter a New Generation of Polyolefins" Nov. 1991, Plastics Technology, or Van Der Sanden "A New Family of Linear Ethylene Polymers With Enhanced Sealing Performance" February 1992, and further in view of Wilhoit (5,283,128).

Newsome has been previously discussed. Newsome does not teach using metallocene catalyzed polyethylenes, or polymers or copolymers formed by a polymerization reaction with a single site catalyst.

Schut, an Exxon trade journal, teaches a new line of linear low density polyolefins made using homogenous single site metallocene catalysts, wherein the polyolefins have a density of at least 0.90 g/cc. Furthermore, Schut teaches that EXXPOL EXACT-101 has a total impact strength of 107 in.-lb. These polyolefins have physical characteristics far superior to traditional polyolefins produced from conventional Ziegler/Natta catalysis. For example: metallocene catalyzed polyolefins have lower heat-seal initiation temperatures, higher strength (Dart impact results), and better clarity. The superior attributes of these metallocene catalyzed polyolefins are further elaborated in Van der Sanden et al. (Pages 99-100); and they further teach that these polyolefins are a choice material in the production of heat sealable films. Finally it should be

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noted that metallocene catalyzed polyolefins (1-butene, 1-hexene, or 1-octene/ethylene copolymers) are commercially available from Dow in the form of "Affinity" or from Exxon in the form of "Exact". As discussed above Van der Sanden et al. and Schut teach that commercially available metallocene catalyzed LLDPE have physical properties far superior to that of analogous LLDPE formed by Ziegler-Natta catalysis.

It would have been obvious to one having ordinary skill in the art at the time of the invention to have used the commercially available metallocene catalyzed LLDPE of the type taught by Schut or Van der Sanden et al. in the laminate structure of Newsome to have produced a film with superior strength and performance.

The combination of references fails to specifically teach irradiation of the film.

Wilhoit has been previously discussed.

Since Wilhoit teaches cross-linking by irradiation of a similar film material to that of Newsome for use in food packaging, it would have been obvious to one having ordinary skill in the art to have irradiated the film of Newsome to have provided additional abuse and puncture resistance.

Although the combination of references does not specifically teach the claimed thicknesses, It would have been obvious to one having ordinary skill in the art to have varied the thickness of the layers based upon the desired degree of strength and flexibility. Since the Newsome reference teaches film layer thicknesses which are reasonably close to that which is

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claimed, varying the thickness of the film layers is deemed to be routine optimization and would have been obvious to one having ordinary skill in the art based upon the desired properties.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

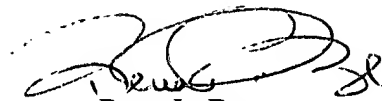
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 17,18,20 and 21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2,4-13,15,16 and 21 of copending Application No. 08/899,410. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims recited in the present patent application are recited broadly enough to include or encompass that which is recited in related patent application serial number 08/899,410.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Dye whose telephone number is (703) 308-4331.

A handwritten signature in black ink, appearing to read 'Rena L. Dye', with a stylized flourish at the end.

Rena L. Dye
Primary Examiner
Tech Center 1700

R. Dye
April 6, 2001